LaTeX packages

27. Juli 2024

Inhaltsverzeichnis

1 Section

Dummy text

1.1 Subsection

Dummy text

2 Another Section

Dummy text
Only with `\usepackage[ngerman]{babel}`, ä ü ö can be displayed.
This part can be used with package 'amsmath'

$$f(x) = x^2$$

This part can be used with package 'graphicx'

Abbildung 1: LaTeX figure

For subfigures, package 'subcaption' is needed

(a) 1 (b) 2

Abbildung 2: Two subfigures

3 Tables

Normal table

A	B	C
L	C	R
left	center	right
1	2	3
1.01	2.02	3.03
1.1	2.002	3.003

booktabs

A	B	C
L	C	R
left	center	right
1	2	3

Aligned decimal

1.000	2.000	3.000
1.010	2.020	3.030
1.100	2.002	3.003

multirow table

A	B C	C R
L left	center	right
1		2

longtable

A	B	C
L	C	R
left	center	right
1	2	3
2	2	3
3	2	3
4	2	3
5	2	3
6	2	3
7	2	3
8	2	3
9	2	3
10	2	3
11	2	3
12	2	3
13	2	3
14	2	3
15	2	3
16	2	3
17	2	3

A	B	C
L	C	R
left	center	right
18	2	3
19	2	3
20	2	3
21	2	3
22	2	3
23	2	3
24	2	3
25	2	3
26	2	3
27	2	3
28	2	3
29	2	3
30	2	3

Rotated table

A	B	C
L	C	R
left	center	right
1	2	3

	Step	Temp.	u_x	u_y	u_z
Autogenerated csv table		K	Å	Å	Å
	0000020000	360.000	0.139×10^{-3}	-0.488×10^{-3}	-0.152
	0000025000	360.000	-0.564×10^{-3}	0.698×10^{-3}	-0.152

4 Drawing
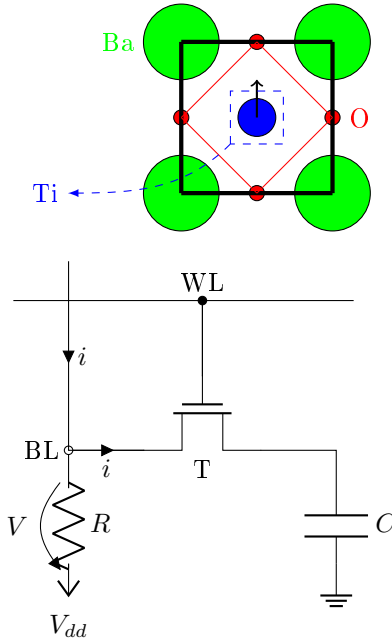
5 Source Code Listings

```
1  #!/usr/bin python
2  def hello_world(text=''):
3      print(''Hello World {}!''.format(text))
```

```
1  Class Number():
2      def __init__(self, n=1):
3          self.number=n
4
5      def print(self):
6          print("The number is {}.".format(n))
```

6 Citations & Hyperlinks

These are citations[1] and Paul u. a. ("Ferroelectric Phase Transitions in Ultrathin Films of BaTiO$_3$", S. 1) using biblatex. Using hyperlinks like this or `https://journals.aps.org/prb/abstract/10.1103/PhysRevB.78.104104`.

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetuer id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum.

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Nulla malesuada porttitor diam. Donec felis erat, congue non, volutpat at, tincidunt tristique, libero. Vivamus viverra fermentum felis. Donec nonummy pellentesque ante. Phasellus adipiscing semper elit. Proin fermentum massa ac quam. Sed diam turpis, molestie vitae, placerat a, molestie nec, leo. Maecenas lacinia. Nam ipsum ligula, eleifend at, accumsan nec, suscipit a, ipsum. Morbi blandit ligula feugiat magna. Nunc eleifend consequat lorem. Sed lacinia nulla vitae enim. Pellentesque tincidunt purus vel magna. Integer non enim. Praesent euismod nunc eu purus. Donec bibendum quam in tellus. Nullam cursus pulvinar lectus. Donec et mi. Nam vulputate metus eu enim. Vestibulum pellentesque felis eu massa.

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[1] Nishimatsu u. a., "Fast molecular-dynamics simulation for ferroelectric thin-film capacitors using a first-principles effective Hamiltonian", S. 2.

Literatur

Nishimatsu u. a.: Fast molecular-dynamics simulation for ferroelectric thin-film capacitors using a first-principles effective Hamiltonian   **PhysRevB.78.104104**

Takeshi Nishimatsu u. a. "Fast molecular-dynamics simulation for ferroelectric thin-film capacitors using a first-principles effective Hamiltonian". In: *Phys. Rev. B* 78 (10 2008), S. 104104. DOI: 10.1103/PhysRevB.78.104104. URL: https://link.aps.org/doi/10.1103/PhysRevB.78.104104.

Paul u. a.: Ferroelectric Phase Transitions in Ultrathin Films of $BaTiO_3$
                    PhysRevLett.99.077601

Jaita Paul u. a. "Ferroelectric Phase Transitions in Ultrathin Films of $BaTiO_3$". In: *Phys. Rev. Lett.* 99 (7 2007), S. 077601. DOI: 10.1103/PhysRevLett.99.077601. URL: https://link.aps.org/doi/10.1103/PhysRevLett.99.077601.